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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|---|
| Office Action Summary | Application No. 10/586,738 | Applicant(s) ATHERTON, PETER SAMUEL |
| | Examiner QUANG PHAM | Art Unit 2612 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12/20/2010.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2,4-9 and 12-17 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-2, 4-9, and 12-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftperson's Patent Drawing Review (PTO-942)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

Respond to Applicant's Arguments/Remarks

1. Applicant's arguments, see Remarks, filed 12/20/2010, with respect to the rejections of claims 1-2, 7-9, and 12-15 under 35 USC 102(b) (over **Eberhard**), claims 3, 5, and 10 under 35 USC 103(a) (over **Eberhard** in view of **Beigel**), claims 4 and 11 under 35 USC 103(a) (over **Eberhard**), claims 6 and 16 under 35 USC 103(a) (over **Eberhard** in view of **Halope**), and claim 17 under 35 USC 103(a) (over **Eberhard** in view of **Gustafson**), has been fully considered and are not deemed persuasive.

On the Applicant's remarks pages 2-4, the Applicant indicated the cancellation of claims 3 and 10-11.

On the Remarks page 7, the Applicant argued that the radio frequency identification tag circuit chip assembly is a chip and not a module. The Examiner disagreed with the Applicant because the radio frequency identification tag circuits chip assembly in **Eberhard** is a discrete unit that has all the characteristics and properties of "a module" such as being discrete, unitary, can be separately manufactured/assembled, etc., and as such it has been interpreted as the radio frequency identification module. In addition, the Applicant provides the conclusion that the radio frequency identification chip of **Eberhard** is a chip and not a module without providing explanations and/or factual evidences to support the Applicant's conclusion.

On the Remarks page 7, the Applicant argued the teaching of **Eberhard** and **Beigel** are not combinable due to the reason that the chip of **Beigel** is applied directly to the substrate of material, which is more delicate and precise process sine the chip is small fragile object with small connection pads. The Examiner disagreed with the Applicant because the rejection was based on the PRIMARY teaching of **Eberhard** who taught all the limitations of amended

claims 1, 7, and 14 (See below rejections of **claim 1, 7, and 14** for details) except for the claimed limitation of the coupling being non-contact electrical coupling. **Beigel** discloses a method wherein the RFID antenna coupled to the RFID chip to reduce the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (abstract, column 2 lines 29 – column 3 lines 2, and FIG. 1). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to modify **Eberhard** to include the coupling being non-contact electrical coupling, as taught by **Beigel**, in the method of attaching RFID module to an item of **Eberhard**, for the purpose of reducing the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (**Beigel**: column 2 lines 63 – column 3 lines 2).

On the Remarks page 7, the Applicant argued **Eberhard** does not teach the limitations of the chip being on one side of the substrate material and the antenna on the other side. This limitation was not claimed. In addition, **claim 7** recited “the item includes an inside surface and an outside surface and that the method further includes providing the RF antenna on the inside surface of the item and attaching the RFID electronics module in an adjacent position to the outside surface of the item.” As in the rejection mailed on 06/18/2010, the Examiner provided **Eberhard** taught the method printing antenna inside the surface of the item in order to reduce the orientation sensitivity of the RFID tag, for instance (column 10 lines 3-42 and FIG. 15 the antenna element 424 and 426). **Eberhard** discloses different method of attaching the RFID chip to the RFID antenna (FIG. 1-14). In addition, **Eberhard** discloses RFID chip is in an adjacent position to the outside surface of the item when the antenna is printed on the inside surface of the item (column 8 lines 10-33 and FIG. 11). Therefore, it would have been obvious to one of the

ordinary skill in the art at the time of the claimed invention to include the method wherein the item includes an inside surface and an outside surface and further comprising providing the RF antenna on the inside surface of the item and attaching the RFID electronics module in an adjacent position to the outside surface of the item, as taught by **Eberhard**, to achieve the claimed invention for the purpose of reducing the orientation sensitivity of the RFID tag and protecting the RFID tag from damage by placing the RFID chip below the surface of the item and the result would have been predictable.

Therefore, due to the claimed amendments, upon further consideration, a new ground of rejections necessity by amendments is made in view of following reference/combinations.

Examiner Notes

2. Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-2, 4-5, 7-9, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eberthard et al. (Eberthard – US 6,107,920) in view of Beigel (Beigel – US 6,181,287 B1).**

(1). As to **claim 1, Eberthard** discloses radio frequency identification tag having an article integrated antenna. Further, **Eberthard** discloses a method, comprising:

providing an RF antenna (FIG. 1 the antenna 22) on an item (abstract, column 3 lines 47 – column 4 lines 2, column 4 lines 17-23, FIG. 1 the article 10); and

providing a RFID electronics module electrically coupling the RFID electronics module (FIG. 1 the RFID tag circuit chip 12) to the RF antenna (FIG. 1 the antenna 22) on the item after the RF antenna is provided on the item (abstract, column 4 lines 17-23, column 4 lines 34-44, FIG. 1, and FIG. 2);

thereby providing an RFID capability for the item (column 4 lines 10-15, column 5 lines 33-40, and FIG. 1).

Except for the claimed limitations of the coupling being a non-contact electrical coupling.

In the same art of RFID design, **Beigel** discloses a method wherein the RFID antenna coupled to the RFID chip in a non contact coupling, e.g. appropriate frequencies, capacitive, inductive, or lumped reactive, etc. to reduce the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (abstract, column 2 lines 29 – column 3 lines 2, and FIG. 1).

Therefore, in view of **Eberhard** and **Beigel**'s teachings, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the coupling being a non-contact electrical coupling, as taught by **Beigel**, in the method of attaching RFID module to an item of **Eberhard**, for the purpose of reducing the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (**Beigel**: column 2 lines 63 – column 3 lines 2) and the result would have been predictable in the combination of **Eberhard** and **Beigel**.

(2). As to **claim 2**, **Eberhard** and **Beigel** disclose the limitations of **claim 1**. Further, **Eberhard** discloses the method wherein electrically coupling comprises attaching the RFID module to the item to provide an RFID function for the item (abstract, column 4 lines 10-15, column 4 lines 17-23, column 4 lines 34-44, column 5 lines 33-40, FIG. 1, and FIG. 2).

(3). As to **claim 4**, **Eberhard** and **Beigel** disclose the limitations of **claim 1** except for the claimed limitations of the method wherein the item includes an inside surface and an outside surface and further comprising providing the RF antenna on the inside surface of the item and attaching the RFID electronics module in an adjacent position to the outside surface of the item.

Eberhard discloses the a method printing antenna inside the surface of the item in order to reduce the orientation sensitivity of the RFID tag, for instance (column 10 lines 3-42 and FIG. 15 the antenna element 424 and 426). **Eberhard** discloses different method of attaching the RFID chip to the RFID antenna (FIG. 1-14). In addition, **Eberhard** discloses RFID chip is in an adjacent position to the outside surface of the item when the antenna is printed on the inside surface of the item (column 8 lines 10-33 and FIG. 11). Therefore, in **Eberhard** and **Beigel**'s teaching, it would have been obvious to one of the ordinary skill in the art at the time of the

claimed invention to include the method wherein the item includes an inside surface and an outside surface and further comprising providing the RF antenna on the inside surface of the item and attaching the RFID electronics module in an adjacent position to the outside surface of the item, as taught by **Eberhard**, in the method of attaching the RFID module to an item of **Eberhard** and **Beigel**, for the purpose of reducing the orientation sensitivity of the RFID tag and protecting the RFID tag from damage by placing the RFID chip below the surface of the item and the result would have been predictable in the combination of **Eberhard** and **Beigel**.

(4). As to **claim 5**, **Eberhard** and **Beigel** disclose the limitations of **claim 1**. Further, **Eberhard** discloses the method further comprising:

providing the RF antenna (FIG. 1 the antenna 22) with a first set of contact pads (column 4 lines 34-37 and FIG. 1 the first coupling region 28 and FIG. 1 the second coupling region 30);
providing the RFID module (FIG. 1 the chip assembly 12) with a second set of contact pads (column 4 lines 55-67 and FIG. 2 the first conductive member 38 and the second conductive member 40).

Except for the claimed limitations of aligning the first and second set of contact pads in a predetermined manner relative to each other when attaching the RFID module to the item whereby the RFID module is non-contact electrically coupled to the RF antenna.

In the same art of RFID design, **Beigel** discloses a method wherein the RF antenna coupled to the RFID chip in a non contact coupling, e.g. appropriate frequencies, capacitive, inductive, or lumped reactive, etc. to reduce the need for the electrical connection between the RFID chip and the RF antenna through the substrate (abstract, column 2 lines 29 – column 3 lines 2, and FIG. 1).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include aligning the first and second set of contact pads in a predetermined manner relative to each other when attaching the RFID module to the item whereby the RFID module is non-contact electrically coupled to the RF antenna, as taught by **Beigel**, in the method of attaching RFID module to an item of **Eberhard**, for the purpose of reducing the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (**Beigel**: column 2 lines 63 – column 3 lines 2) and the result would have been predictable in the combination of **Eberhard** and **Beigel**.

(5). As to **claim 7, Eberhard** discloses radio frequency identification tag having an article integrated antenna. Further, **Eberhard** a method comprising,
applying an RF antenna (FIG. 1 the antenna 22) directly to an item (column 4 lines 16-23);

providing an RFID electronics module (FIG. 1 the RFID tag circuit chip 12) separate from the item (FIG. 1) and the RF antenna on the item (FIG. 1 the first surface 18), the RFID electronics module including electronics that provide an RFID capability when coupled to the RF antenna (column 4 lines 10-15, column 5 lines 33-40, and FIG. 1);

applying the RFID electronics module to the item after applying the RF antenna to the item (abstract, column 4 lines 17-23, column 4 lines 34-44, FIG. 1, and FIG. 2).

Except for the claimed limitations of whereby the RFID electronics module is electrically coupled to the RF antenna by a non-contact coupling.

In the same art of RFID design, **Beigel** discloses a method wherein the RFID antenna coupled to the RFID chip in a non contact coupling, e.g. appropriate frequencies, capacitive,

inductive, or lumped reactive, etc. to reduce the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (abstract, column 2 lines 29 – column 3 lines 2, and FIG. 1).

Therefore, in view of **Eberhard** and **Beigel**'s teachings, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the RFID electronics module is electrically coupled to the RF antenna by a non-contact coupling, as taught by **Beigel**, in the method of attaching RFID module to an item of **Eberhard**, for the purpose of reducing the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (**Beigel**: column 2 lines 63 – column 3 lines 2) and the result would have been predictable in the combination of **Eberhard** and **Beigel**.

(6). As to **claim 8**, **Eberhard** and **Beigel** disclose the limitations of **claim 7**. Further, **Eberhard** discloses the method of claim 7, further comprising:

providing alignment features (FIG. 1 the first coupling region 28 and the second coupling region 30) on the item and positioning the RFID electronics module on the item based on a location of the alignment features (column 4 lines 29-44).

(7). As to **claim 9**, **Eberhard** and **Beigel** disclose the limitations of **claim 7**. Further, **Eberhard** discloses the method further comprising providing an adhesive on the RFID electronics module; and applying the RFID electronics module to the item by means of the adhesive (column 4 lines 29-44 and FIG. 2 the anisotropic adhesive 34).

(8). As to **claim 12**, **Eberhard** and **Beigel** disclose the limitations of **claim 7**. Further, **Eberhard** discloses the method wherein applying the RF antenna to the item comprises printing the RF antenna on the item (column 4 lines 16-23).

(9). As to **claim 13**, **Eberhard** and **Beigel** disclose the limitations of **claim 12**. Further, **Eberhard** discloses the method wherein the RF antenna is printed on the item using electrically conductive ink (column 4 lines 16-29).

(10). As to **claim 14**, **Eberhard** discloses radio frequency identification tag having an article integrated antenna. Further, **Eberhard** discloses in combination, an item (column 3 lines 56 - column 4 lines 2 and FIG. 1 the article 10) having at least one surface (FIG. 1 the first surface of the article 15) and an RF antenna (FIG. 1 the antenna 22) applied to the surface (FIG. 1); and an RFID electronics module (FIG. 1 the RFID tag circuit chip 12) separate from the item and from the RF antenna on the item (FIG. 1), the RFID electronics module including electronics which provide an RFID capability when coupled to the RF antenna (column 4 lines 10-15, column 5 lines 33-40, and FIG. 1), the RFID electronics module being applied to the item so as to be electrically coupled to the RF antenna and provide an RFID capability for the item (abstract, column 4 lines 17-23, column 4 lines 34-44, FIG. 1, and FIG. 2), except for the claimed limitations of the RF antenna being coupled to the RFID electronics module by a non-contact coupling.

In the same art of RFID design, **Beigel** discloses a method wherein the RFID antenna coupled to the RFID chip in a non contact coupling, e.g. appropriate frequencies, capacitive, inductive, or lumped reactive, etc. to reduce the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (abstract, column 2 lines 29 – column 3 lines 2, and FIG. 1).

Therefore, in view of **Eberhard** and **Beigel**'s teachings, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the RF antenna

being coupled to the RFID electronics module by a non-contact coupling, as taught by **Beigel**, in the combination of attaching RFID module to an item of **Eberhard**, for the purpose of reducing the need for the electrical connection between the RFID chip and the RFID antenna through the substrate (**Beigel**: column 2 lines 63 – column 3 lines 2) and the result would have been predictable in the combination of **Eberhard** and **Beigel**.

(11). As to **claim 15**, **Eberhard** and **Beigel** disclose the limitations of **claim 14**. Further, **Eberhard** discloses the combination further comprising an adhesive attaching the RFID electronics module to the item (column 4 lines 29-44 and FIG. 2 the anisotropic adhesive 34).

5. **Claims 6 and 16 are rejected under 35 USC 103(a) as being unpatentable over Eberhard in view of Beigel and further in view of Halope et al. (Halope – US 6,770,509 B2).**

(1). As to **claim 6**, **Eberhard** and **Beigel** discloses the limitations of **claim 1** except for the claim limitations of the method further comprising providing a dielectric between the RF antenna and the RFID electronic module.

In the same art of producing RFID tags, **Halope** discloses a method comprising steps of applying the dielectric material between the RFID chip and the RFID antenna to maintain the position of the RFID chip (abstract, column 2 lines 57-63, column 3 lines 25-35, and FIG. 3 the adhesive dielectric material 20).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the method further comprising providing a dielectric between the RF antenna and the RFID electronic module, as taught by **Halope**, in the method of attaching RFID module to an item of **Eberhard** and **Beigel**, for the purpose of maintaining the RFID chip

position relative to the contacts by applying the adhesive electric material between the RFID chip and the RFID antenna and the result would have been predictable in the combination of **Eberhard, Beigel, and Halope.**

(2). As to **claim 16**, **Eberhard and Beigel** discloses the limitations of **claim 14** except for the claim limitations of the combination further comprising a dielectric between the RFID electronics module and the RF antenna.

In the same art of producing RFID tags, **Halope** discloses a method comprising steps of applying the dielectric material between the RFID chip and the RFID antenna to maintain the position of the RFID chip (abstract, column 2 lines 57-63, column 3 lines 25-35, and FIG. 3 the adhesive dielectric material 20).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the method further comprising providing a dielectric between the RF antenna and the RFID electronic module, as taught by **Halope**, in the method of attaching RFID module to an item of **Eberhard and Beigel**, for the purpose of maintaining the RFID chip position relative to the contacts by applying the adhesive electric material between the RFID chip and the RFID antenna and the result would have been predictable in the combination of **Eberhard, Beigel, and Halope.**

6. **Claim 17 is rejected under 35 USC 103(a) as being unpatentable over Eberhard in view of Beigel and further in view of Gustafson (Gustafson – US 6,050,622).**

As to **claim 17**, **Eberhard** discloses the limitations of **claim 14** except for the claimed limitations of the combination wherein the RFID module is adapted to have its RFID capability modified if the RFID electronics module is tampered or removed from the item.

In the same art of designing RFID tag, **Gustafson** discloses a method wherein the function of the RFID tag is modified if the RFID tag is removed from the item (abstract, column 6 lines 35-50, and FIG. 6).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the combination wherein the RFID module is adapted to have its RFID capability modified if the RFID electronics module is tampered or removed from the item, as taught by **Gustafson**, in the combination of attaching the RFID module to an item of **Eberhardt** and **Beigel**, for the purpose of disabling the RFID function in order to prevent the re-usage of the RFID tag or to detect the tampering of the RFID tag and the result would have been predictable in the combination of **Eberhardt**, **Beigel**, and **Gustafson**.

Citation of Pertinent Art

7. The prior are made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. **Monico, US 6,259,369 B1, discloses low cost long distance RFID reading.**
- b. **Cocita, US 5,955,949, discloses layered structure for a transponder tag.**
- c. **Maloney, US 2001/0006368 A1, discloses object tracking system with non-contact object detection and identification.**
- d. **Barber et al., US 2003/0197653 A1, discloses RFID antenna apparatus and system.**
- e. **Jesser, US 2004/0046663 A1, discloses RFID tag assembly and system.**
- f. **Lie et al., US 2005/0035924 A1, discloses RFID device and method of forming.**
- g. **Baba et al., US 2006/0032926 A1, discloses radio frequency identification (RFID) tag and manufacturing method thereof.**

- h. Nysen et al., US 5,095,240, discloses inductively coupled saw device and method for making the same.
- i. Luch, US 6,582,887 B2, discloses electrically conductive patterns, antennas and methods of manufacture.
- j. Brollier et al., US 6,667,092 B1, discloses RFID enabled corrugated structures.
- k. Kralovec et al., US 6,741,212 B2, discloses low profile dielectrically loaded meanderline antenna.
- l. Carrender, US 7,049,966 B2, discloses flat antenna architecture for use in radio frequency monitoring systems.
- m. Phaneuf et al., US 7,224,278 B2, discloses label with electronic components and method of making same.
- n. Forster et al., US 7,730,606 B2, discloses manufacturing method for wireless communication device and manufacturing apparatus.
- o. DeMichele, US 5,084,699, discloses impedance matching coil assembly for an inductively coupled transponder.
- p. Takasugi et al., US 6,837,438 B1, discloses non-contact information medium and communication system utilizing the same.
- q. Dipriozio et al., US 6,384,727 B1, discloses capacitively powered radio frequency identification device.
- r. Eberhardt, US 6,246,327 B1, discloses radio frequency identification tag circuit chip having printed interconnection pads.
- s. Kato et al., US 7,518,558 B2, discloses wireless IC device.

- t. Zalud et al., US 2006/0012482 A1, discloses radio frequency identification tag having an inductively coupled antenna.
- u. Yamagajo et al., US 7,598,873 B2, discloses RFID tag and manufacturing method thereof.
- v. Credelle et al., US 7,559,131 B2, discloses method of making a radio frequency identification (RFID) tag.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUANG PHAM whose telephone number is (571)-270-3668. The examiner can normally be reached on Monday - Thursday 9:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BENJAMIN LEE can be reached on (571)-272-2963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QUANG PHAM/
Examiner, Art Unit 2612

/BENJAMIN C. LEE/
Supervisory Patent Examiner, Art Unit 2612